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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/042,487	01/09/2002	Andreas Beutler	W-W Case 48	6101
7590 07/27/2004 Flynn, Thiel, Boutell & Tanis, P.C. 2026 Rambling Road Kalamazoo, MI 49008-1699			EXAMINER LEO, LEONARD R	
			ART UNIT 3753	PAPER NUMBER
DATE MAILED: 07/27/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/042,487

Applicant(s)

BEUTLER ET AL.

Examiner

Leonard R. Leo

Art Unit

3753

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 05 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-5,9-15,24 and 25 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-4,9-15,24 and 25 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on May 5, 2004 has been entered.

Claim 8 is cancelled, claims 2-6, 9-15 and 24-25 are pending, and claim 5 remains withdrawn.

Claim Objections

Claim 12 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 10 recites "fins having a T-shaped cross section."

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 9 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Art Unit: 3753

The recitations of "up to 20%" are considered to be an open-ended numerical ranges, where the values include zero as a lower limit, and renders the claims indefinite. See MPEP § 2173.05(c).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made:

Claims 2-4, 9-12, 14 and 24-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al in view of Masukawa et al.

Sato et al (Figure 24) discloses all the claimed limitations except a re-entrant groove.

Masukawa et al discloses a heat exchange tube comprising integral fins defining a main groove 12 and re-entrant groove 14 therein for the purpose of improving vaporization efficiency.

Since Sato et al and Masukawa et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Masukawa et al would have been recognized in the pertinent art of Sato et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Sato et al a re-entrant groove for the purpose of improving vaporization efficiency as recognized by Masukawa et al.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al in view of Masukawa et al as applied to claims 2-4, 9-12, 14 and 24-25 above, and further in view of Beutler et al.

Art Unit: 3753

The combined teachings of Sato et al and Masukawa et al lacks plain ends.

Beutler et al (Figure 2) discloses a heat transfer tube comprising integral fins 2 on an outside of the tube wall and plain ends 1a and plain center lands 1b for the purpose of ease of connection to tubesheets and baffle plates.

Since Sato et al and Beutler et al are both from the same field of endeavor and/or analogous art, the purpose disclosed by Beutler et al would have been recognized in the pertinent art of Sato et al.

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Sato et al plain ends and plain center lands for the purpose of ease of connection to tubesheets and baffle plates as recognized by Beutler et al.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sato et al in view of Masukawa et al as applied to claims 2-4, 9-12, 14 and 24-25 above, and further in view of McLain.

The combined teachings of Sato et al and Masukawa et al lacks a longitudinal welded seam.

McLain discloses a heat transfer tube comprising integral fins 2 on an outside of the tube wall and a longitudinal welded seam for the purpose of ease of manufacture.

Since Sato et al and McLain are both from the same field of endeavor and/or analogous art, the purpose disclosed by McLain would have been recognized in the pertinent art of Sato et al.

Art Unit: 3753

It would have been obvious at the time the invention was made to a person having ordinary skill in the art to employ in Sato et al a longitudinal welded seam for the purpose of ease of manufacture as recognized by McLain.

Allowable Subject Matter

Claim 6 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

The amendment filed with the RCE is improper, in that, it reflects changes from the After Final amendment filed on March 8, 2004. The After Final amendment was deemed entered upon the filing of an Appeal Brief. An Appeal Brief was not filed and the After Final amendment was not entered. However, an examination has been made with respect to the claims as filed with the RCE.

The drawings objection under 37 CFR 1.83(a) is withdrawn in view of the proposed drawing correction filed on March 6, 2004.

The objection to claim 4 is withdrawn.

In the Election filed on December 26, 2002, applicants stated for the record claim 5 does not read on the elected species of Figure 3 and/or sub-species of Figure 5. For sake of argument, claim 5 recites an "essentially uniform cross section." This limitation is contradictory to claim 6 having a "varied" cross section as depicted in Figure 5. Claim 5 remains withdrawn, until a generic allowable claim is found.

Art Unit: 3753

The rejection under 35 USC 112, second paragraph is maintained. Applicants should claim a lower limit. The claim is indefinite when a height of zero is read.

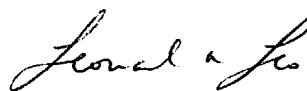
The rejections in view of Fujikake and Nishizawa et al are withdrawn.

No further comments are deemed necessary at this time.

Conclusion

Any inquiry of a general nature, relating to the status of this application or clerical nature (i.e. missing or incomplete references, missing or incomplete Office actions or forms) should be directed to the Technology Center 3700 Customer Service whose telephone number is (703) 306-5648. Status of the application may also be obtained from the Internet: <http://pair.uspto.gov/cgi-bin/final/home.pl>

Any inquiry concerning this Office action should be directed to Leonard R. Leo whose telephone number is (703) 308-2611.



LEONARD R. LEO
PRIMARY EXAMINER
ART UNIT 3753

July 23, 2004